

MA3075WK

Silicon planer type

Constant voltage, constant current, waveform clipper and surge absorption circuit

■ Features

- Mini type package (3-pin)
- Two cathode-common wiring of MA3075

■ Absolute Maximum Ratings (Ta= 25°C)

| Parameter | Symbol | Rating | Unit |
|--|--------------------------|-------------------|------|
| Average forward current | $I_{F(AV)}$ | 100* ¹ | mA |
| Instantaneous forward current | I_{FRM} | 200* ¹ | mA |
| Total power dissipation | P_{tot} * ² | 100* ¹ | mW |
| Non-repetitive reverse power dissipation | P_{ZSM} * ³ | 15 | W |
| Junction temperature | T_j | 150 | °C |
| Storage temperature | T_{stg} | - 55 to + 150 | °C |

*¹ Working value in a single piece

*² With a printed-circuit board

*³ $t=100\mu s$, $T_j=150^\circ C$

■ Electrical Characteristics (Ta= 25°C)*¹

| Parameter | Symbol | Condition | min | typ | max | Unit |
|--|----------------------|------------------|-----|-----|-----|----------|
| Forward voltage | V_F | $I_F=10mA$ | | 0.8 | 0.9 | V |
| Zener voltage | V_Z * ² | $I_Z=5mA$ | 7.0 | 7.5 | 7.9 | V |
| Operating resistance | R_{ZK} | $I_Z=0.5mA$ | | | 120 | Ω |
| | R_Z | $I_Z=5mA$ | | 6 | 15 | Ω |
| Reverse current | I_{R1} | $V_R=5V$ | | | 1 | μA |
| | I_{R2} | $V_R=6.5V$ | | | 60 | μA |
| Temperature coefficient of zener voltage | S_Z * ³ | $I_Z=5mA$ | 2.5 | 4.0 | 5.3 | mV/°C |
| Terminal capacitance | C_t | $V_R=0V, f=1MHz$ | | 80 | 100 | pF |

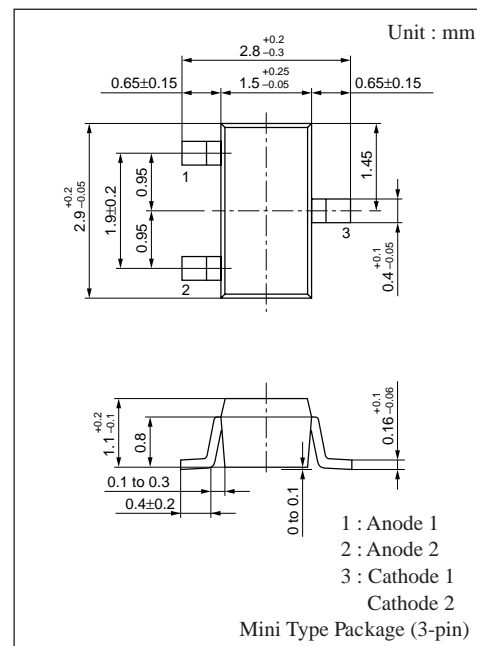
Note 1. Rated input/output frequency : 5MHz

2. *¹ : The V_Z value is for the temperature of 25°C. In other cases, carry out the temperature compensation.

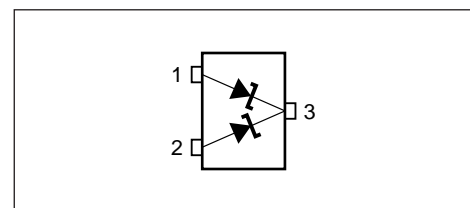
*² : Guaranteed at 20ms after power application

*³ : $T_j=25$ to $150^\circ C$

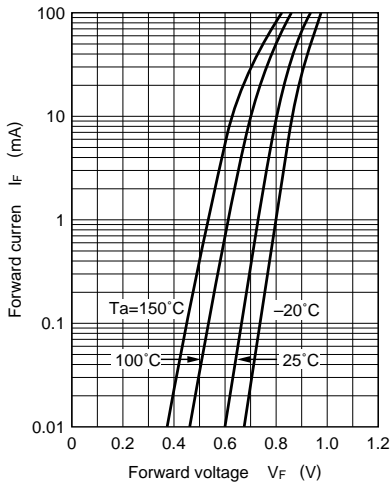
■ Marking



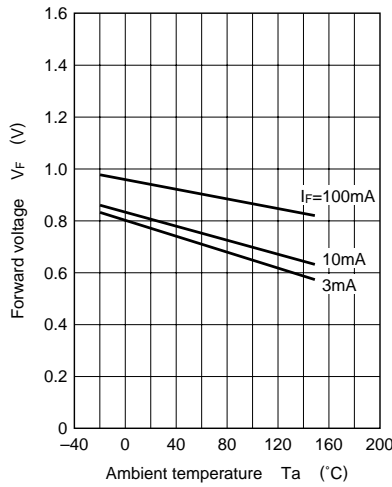
■ Internal Connection



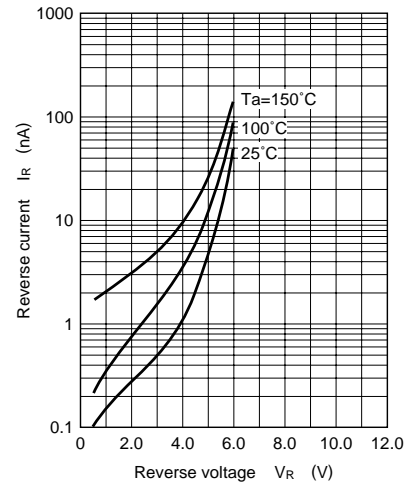
$I_F - V_F$



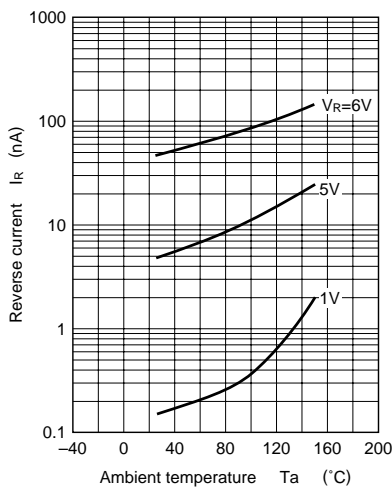
$V_F - T_a$



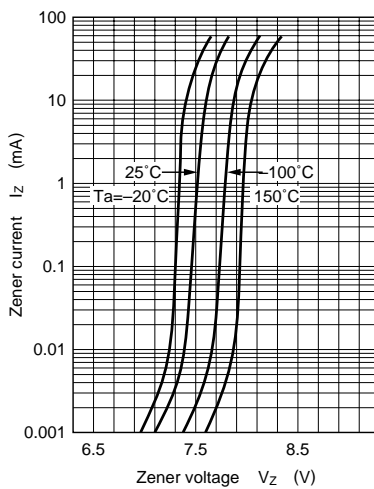
$I_R - V_R$



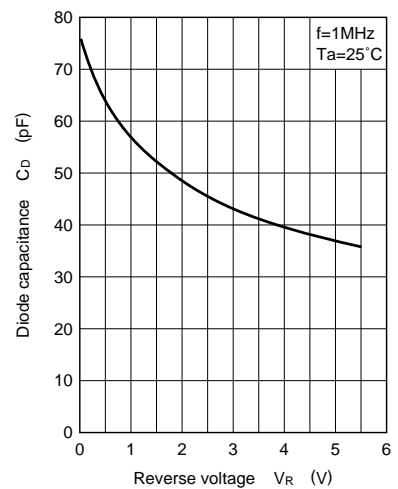
$I_R - T_a$



$I_Z - V_Z$



$C_D - V_R$



$R_Z - I_Z$

